



March 26, 2008
CL08-0127

Mr. James Goldstene
Executive Officer
Air Resources Board
1001 I Street
Sacramento, CA 95812-2815

Dear Mr. Goldstene,

Subject: Mitsubishi Motors Comments Regarding the 2008 Proposed Amendments to the California Zero Emission Vehicle Program Regulations – February 8, 2008 Staff Report: Initial Statement of Reasons.

On behalf of Mitsubishi Motors North America and Mitsubishi Motors Corporation, Mitsubishi Motors R&D of America (Mitsubishi) submits the following comments regarding the 2008 Proposed Amendments to the California Zero Emission Vehicle Program Regulations – February 8, 2008 Staff Report: Initial Statement of Reasons.

Mitsubishi appreciates the time and effort expended by the ARB Staff to craft a reasonable new proposal that addresses the concerns of all stakeholders. Specifically, we thank the Staff and the Board for many opportunities to express our views and receive direct feedback.

Generally, our comments address five specific issues:

1. New ZEV Types and Adjustments to Existing ZEV Types
2. Provide More Equal Treatment of Battery Electric Vehicles (BEV)
3. Establish a Carry forward allowing IVMs to indefinitely retain "Gold" ZEV credits.
4. Modify Transition for Intermediate Volume Manufacturers (IVMs) to provide an additional transition period of six years.
5. Extending the Travel Provision to include Type I, Type 1.5 and Type II ZEVs

Mitsubishi Motors (Mitsubishi) is pleased to provide the following specific comments:

1. New ZEV Types and Adjustments to Existing ZEV Types (ISOR section 3.1.2)

Mitsubishi supports the Staff Proposal creating the Type 1.5 ZEV.

According to existing regulation a full featured BEV with a rated range less than 100 miles is classified as a Type I BEV. With the capability to operate on all classes of roadways, the proposed Type 1.5 ZEV with a rated 75 mile range has much greater potential uses and is significantly different from a Type I City EV. With highway capability and a nominal 30 mile (each way without recharge), the Type 1.5 EV could allow a significant amount of commuters to use this EV to directly replace an existing second/commuter vehicle. Therefore, the greater utility of the Type 1.5 should be recognized with the proposed credit value of 2.5 – between Type I (2) and Type II (3).

Recently, Mitsubishi announced the “iMiEV” - an example of a possible full featured Type 1.5 BEV. The iMiEV will be marketed in Japan starting in CY2009 and Mitsubishi is also planning to begin California fleet testing in Fall 2008. Though the current vehicle is Japanese specification (right hand drive), Mitsubishi will evaluate the iMiEV’s BEV technology to assess its readiness for the US market.

2. Provide More Equal Treatment of Battery Electric Vehicles (ISOR section 3.3)

Mitsubishi agrees with Staff that the cap on use of full-function EVs should be eliminated and the ratio for substitution should be consistent with the credits earned by the vehicle. This would eliminate the strong credit structure bias toward Type III EVs and return the regulation to technological neutrality.

A second “Equal Treatment” issue needs to be addressed – the credit value inconsistency between AT-PZEVs and “pure EVs”.

Please refer to the graphics on next page:

Should a Type I “pure EV” with more all-electric range receive 3.5 times less credit than an P40 AT-PZEV? We expect that even the most advanced P40 AT-PZEV is equipped with an internal combustion engine and fuel tank which both produces emissions. It seems directionally wrong that even a SULEV should gain more credits than a ZEV vehicle.

Table 3.1: Credits for ZEVs 2009 to 2017

Tier	Expected Technology	Range	Existing	Proposed
Type I	Battery EV	50 – 74 miles	2	2
Type I.5 (new)	Battery EV	75 – 99 miles	NA	2.5
Type II	Battery EV	> 100 miles	3	3
Type III	Fuel Cell or Battery EV	Fuel Cell – 100 – 199 miles Battery EV > 200 miles	4	4
Type IV (new)	Fuel Cell	> 200 miles	NA	5

Table 3.7: AT PZEV Post-Multiplier Credit

AT-PZEV Type	Description	2009-2011		2012 and beyond
		Pre-Multiplier	Final Credit	Final Credit
Type E	HEV	0.70	0.70	0.65
CNG	Compressed Natural Gas Engine	0.70	0.70	0.70
HICE	Hydrogen Internal Combustion Engine	2.30	6.90	2.30
B12.5/ 80% ERF	Blended PHEV	1.24	3.72	3.57
B40/ 80% ERF	Blended PHEV	1.78	5.34	5.18
P10	AER PHEV	1.62	4.86	4.85
P40	AER PHEV	2.40	7.20	7.19

Or, why should a P40 AT-PZEV earn more credit than the proposed Type IV?

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We recognize the difference between “Gold” for “pure ZEVs” and the “Silver/proposed Silver+” credits though this is not necessarily a valuable distinction once an Automaker has satisfied their Gold credit obligation. To incentivize production of “pure ZEVs” in excess of regulatory requirements and correct this discontinuity in the ZEV credit structure, **Mitsubishi proposes that ARB should establish a Gold to Silver/Silver+ multiplier.** This would allow the conversion of Gold credits to Silver/Silver+ credits. To correct the numerical credit disparity, we propose the multiplier should be a minimum of 3.75; therefore, a Type I ZEV would receive 7.5 Silver/Silver+ credits compared to 7.19 credits for the P40 AT-PZEV.

3. ZEV Credits: Carry Forward/Carry Back (ISOR section 3.2)

Mitsubishi requests that IVMs should be allowed to earn and bank non-expiring gold credits. Once an IVM becomes or transfers the credit to a Large Volume Manufacturer (LVM), the credits are treated as earned in that year and “ripen” accordingly.

Current IVMs can comply with the ZEV Mandate with 100% PZEVs and have no regulatory requirement for Gold vehicles. Since a IVMs Gold vehicle introduction is a voluntary measure, the credit should not “ripen” and be changed to Silver/Silver+ credit.

This banking of Gold credits can also be considered an alternate method for IVMs to prepare for transition to LVMs. This “early” compliance will allow an IVM to gain credits and experience with Gold vehicle technology to ease their initial years of compliance.

4. Modify Transition for Intermediate Volume Manufacturers (ISOR section 3.7)

Mitsubishi supports Staff’s Proposal to provide an additional six years transition period.

During the last six MYs (1999 – 2004MY), the existing LVMs received additional large multipliers for “early” introduction of ZEVs. As part of the banked credit issue today, these early introduction credits currently provide existing LVMs with an extended transition period.

Also, considering existing LVMs started ZEV development following 1990 Regulation and enforcement took place in 2005 MY, existing LVMs received a 13 – 14 year phase in period.

Historically, no Automaker has yet moved from IVM to LVM. The current regulation (3 years from meeting LVM volume requirements to full implementation) is far more aggressive than past experience has shown possible.

Given the amount of resources required to fully implement the ZEV Mandate and the expected change to the “New Path”, it seems clear that more patient, cautious approach is appropriate.

5. Extend the Travel Provision (ISOR section 3.6)

Mitsubishi supports Staff’s Proposal to extend the Travel Provision to include Type I, Type 1.5 and Type II ZEVs through 2014.

All levels of ZEVs require significant testing and development to support their successful re-introduction into the US market. It is important and beneficial to focus R&D and other resources within California:

- A. Without the Travel Provision and to satisfy section 177 State ZEV requirements, redundant state-specific R&D groups and advanced technology service facilities must be created to support the additional (and redundant) test fleets. These additional programs would add significant cost and complexity to the test program.
- B. Staff suggested that section 177 States would effectively double the size of the national fleet. An alternate view is Mitsubishi would reduce our projected California test fleet by more than ½ to supply vehicles to the other states. Again, the added infrastructure, cost and complexity would further reduce the overall size of the test fleet or delay the test program completion.

Clearly, Mitsubishi Motors believes that mass produced battery electric vehicles will be available in the near future and we hope our proposed changes help return the ZEV Mandate to technical neutrality.

If you have any questions regarding these proposals, please feel free to contact me at (714) 372-9510 or david.patterson@na.mitsubishi-motors.com.

Sincerely,



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Regulatory Affairs & Certification
Mitsubishi Motors R&D of America, Inc.

cc: Thomas Cackette, Chief Deputy Executive Officer of the Air Resources Board
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